DUBNIDON, P.—Le Culte des Morts et les Cimetières. *Rev. Occidentale*, Jan.

DURAND.—Sur les races nobles de l'Aveyron. *Bull. Soc. d'Anthrop. de Paris*, 1879, II, 421.

GARCIN, C.—La tête et le crâne d'un Neo-Caledonien. *Marseille Med.*, 1879, XVI.

GEOFFROY, J.—La connaissance et la denomination des couleurs. *Bull. Soc. d'Anthrop. de Paris*, 1879, II.

GIGLIOLI, E. H.—Nuove notizie sui popoli negroidi degli Asia e specialmente sui Negriti. *Archiv. per l'Anthrop.* Firenze, 1879, IX.

GIRARD, J.—Migrations Africaines. *Bull. d. l. Soc. Geographie*, Oct.

GOMME, G. L.—Folk-lore and the Folk-lore Society. *Antiquary*, Jan.

HOFFMANN, W.—Russian Superstitions. *Penn Month.*, Jan.

Instructions générales pour les recherches anthropologiques à faire sur le vivant. Paris, 1879.

KOTELMANN, L.—Die Augen von 9 Lapländern, 3 Patagoniern, 13 Nubiern, und 1 neger vom weissen Nil. *Berlin Klein Wchnschr.*, 1879, XVI.

LE BON.—Des differences de volume du crâne suivant les races, les individus, et les sexes. [Extract from his memoir crowned by the Soc. d'Anthrop. de Paris with the first prize.] *Gaz. d'hôp.* Paris, 1879, LII.

LEBON, G.—Resultats fournis par la mesure des capacites de crânes ayant appartenu a des hommes célèbres. Compt. rend. Acad. d. Sc. Paris, 1879, LXXXIX.

Marriage Proposals, Curious. *Chambers' Joun.*, Jan.

MEEH, K.—Oberflächenmessungen des menschlichen Körpers. *Ztschr. f. Biol.*, München, 1879, XV.

MODEGLIANI, L.—Di alcune linee faciali trasverse nel cranio di varie razze. *Arch. per l'Antrop.* Forenze, 1879, IX.

MONTAGUE, C.—About Kissing. *Potter's Am. Month.*, Feb.

PARKER, Dr. A. J.—On the brain of a Chimpanzee. *N. Y. Medical Record*, Jan.

RAMON DE TORRES MARTINEZ, J.—Contribucion a la antropologia, Forma el hombre un reino aparte dentro del órden de la creacion? *Encicl. méd.-farm.* Barcelona, 1879. III.

RICE, L.—The Ganga Kings. *Madras J. of Literature*, I.

ROTH, E.—Beitrage zur Erblichkeitsfrage. *Berlin Klin. Wchnschr.* 1879, XVI.

SABIN. JOSEPH—A Dictionary of Books relating to America. Parts 60–70. Joseph Sabin and Sons, New York.

SCHÖLER—Ueber die Stellung der Ophthalmologie zur Anthropologie. *Arch. f. path. Anat.* Berlin, 1879, LXXVIII.

STAGE, G. G.—Weight in the first year. Copenhagen, 1879.

TARUFFI, C.—Dell' antropometria e delle anomelie della colona vertebrale. *Ann. univ. di med. e chir.* Milano, 1879, CCXXLIX.

VAUGHN, MGR.—L'Homme: son origine, sa destinee. *Annales d. Philos. Chretienne*, Jan.

Vedas, Antiquity of the. *Theosophist*, Oct., 1879.

WEISGERBER, HENRI.—De l'indico thoracique. Paris, 1879.

WEST, E. P.—A buried race in Kansas. *Kansas City Rev.*, Jan.

WIENER, C.—Gran-Chimu et la ville de Cuzco. *Bull. d. l. Soc. de Geog.*, Oct.

WOINARSKI, S. E. A. Z.—Some statistics of the length and weight of children born in the Lying-in Hospital, Melbourne. *Austral. M. Journ.* Melbourne, 1879, I.

GEOLOGY AND PALÆONTOLOGY.

A NEW GENUS OF TAPIROIDS.—In 1873 I obtained the anterior part of the skeleton of a tapiroid mammal from the Eocene beds of the Washakie basin in south-western Wyoming. Having recently had occasion to examine the specimen, on removing the matrix I was surprised to find that it only possessed three digits

in the anterior foot, the fourth (fifth) being represented by a rudimental metacarpal. It thus differs from *Hyrachyus*, and allied genera of the Eocene, and places itself in direct association with the three-toed forms of the Lower Miocene. The dentition is however that of *Hyrachyus*. The premolars differ from the true molars in form, and the transverse crests of the latter are uninterrupted. There is a diastema, in which it differs from (*Helaletes*) *Tapirulus*. (See Scott, Osborn and Spier on this genus.) The inferior molars are like those of the rhinoceroses. The ulna and radius are distinct. I call this genus thus characterized, *Triplopus*, and the species *T. cubitalis*, with the following description:

The interorbital region of the skull is wide and flat, and the sagittal crest is low. The muzzle is rather short, and the anterior border of the orbit marks about the middle of the first true molar. The posterior external crescent of the superior true molars is without bounding or dividing ridge, while the median ridge of the anterior crescent is very strong. The same is true of the confluent crescents of the premolars. The crests of the inferior true molars have strong ridges descending anteriorly from their outer extremities. The fore-limb, especially the cubitus, is rather slender. Length of superior molar series, m. .055; of true molars, .030; of superior diastema, .012; interorbital width, .049; length of humerus, .111; of radius, .143; of median metacarpus, .066; of median digit, .028. The species was about the size of a fox. The form has a good claim to be regarded as the type ancestral to *Hyracodon*.—*E. D. Cope.*

The Structure of the Permian Ganocephala.—Examination of abundant material shows the correctness of my anticipation (this Journal 1878, 633), that the vertebræ of the large batrachian *Eryops*, would turn out to have the structure found in *Rhachitomus*. This genus then must be referred to the same sub-order as *Trimerorhachis*, and probably *Actinodon* Gaudry, which will be characterized by the segmented vertebral centra. If European authors are correct in stating that the vertebræ of the *Labyrinthodontia* have undivided centra, the sub-order above mentioned, must probably retain the name of *Ganocephala*, with additional characters.

The identification of the scapular arch in *Eryops*, and of the pelvic arch in *Eryops* and *Cricotus*, gives the following results: The glenoid cavity is an excavation in two coössified elements, of which the inferior and posterior is probably coracoid. The latter is then much smaller than in *Reptilia* and *Batrachia anura*, but resembles that of the salamanders. The scapular arch proper, resembles that of the *Urodela*. The pelvis is intermediate between that of the anurous and urodelous *Batrachia*. There is no obturator foramen, and the common symphysis is deep. The humerus closely resembles that of the *Pelycosauria*, differing chiefly in the non-enclosure of the supracondylar foramen.

The resemblance of the scapular and pelvic arches of the *Pelycosauria*[1] to those of the *Batrachia* above described, is remarkable. In *Dimetrodon* and *Clepsydrops*, the principal difference to be observed in the pelvis, is the much stronger attachment of the ilium to the sacrum. In the scapular arch the principal peculiarity in the coössified portions, is the posterior double emargination of the coracoid. It is thus evident that in the Permian period there was a much closer approximation between the Batrachian, Reptilian and Mammalian types than at any later period. —*E. D. Cope.*

BUTHOTREPHIS FROM YORK COUNTY, PA.—Prof. Frazer has recently obtained specimens of *Buthotrephis flexuosa* from the Peach Bottom Slate quarries, near the Susquehanna river. The slate of this region, according to Prof. Frazer, is bounded, both above and below, by chlorites of great thickness, which have been heretofore regarded as lying much below the palæozoic rocks. As the *Buthotrephis flexuosa* is characteristic of the Hudson river epoch at the summit of the Lower Silurian, this discovery disturbs views previously held, and opens up new questions in the stratigraphy of the region.

THE COMSTOCK LODE.—The scientific history of the Comstock has had three periods of development. First came in 1865, Von Richthofen, who had carefully studied the eruptive rocks of Transylvania, and was able to settle, once for all, the grand features of Washoe geology. He showed that the country rock of the Comstock was made up of four principal members, which are: diorite, at the base; propylite, overlying it; andesite, disposed in dikes through the mass of both these rocks; and finally trachyte, which seems to have no immediate connection with the diorite, but lies entirely in and upon the propylite. These four rocks were laid down in the order named. To this mass of information Mr. Clarence King, in 1870, added not only a careful discussion of the shape and occurrence of ore-bodies, but also the grand fact, not perceived before, that the lode lies upon one of the dikes of andesite. For the rest, it was supposed that the diorite had been injected as a dome into a mass of sedimentary strata, the remnants of which are still observable, and that it already formed a mountain peak before propylite, the succeeding rock, appeared. When the latter did come, it poured in irregular floods, covering the diorite mountain nearly or quite to its summit. The andesite was thought to have been injected into cracks broken through this vast mass of propylite; while the trachyte was looked upon as the real lode-maker.

The convulsions which attended its appearance were supposed to have opened a great crevice into which poured the waters from which the ore was deposited.

[1] See this Journal, 1878, p. 829.

Prof. John A. Church has recently written a book on "The Formation and History of the Comstock Lode." His account of Comstock geology differs essentially from this. He concurs with his predecessors in regard to the position and order of the rocks and the presence of a dike under the lode; but he gives to the rocks and to the lode itself a different history. He finds that the diorite and propylite are both stratified, and their strata are approximately conformable.

They were laid down in the horizontal position, and have been elevated into a mountain range by the ordinary operation of pressure and folding. The dikes of andesite have not broken through cracks opened across the other rocks, but are bedded, interposed between the strata of diorite and propylite. The openings between these strata were not originally so thick as the quartz seams now are. At first they were the merest partings between two layers of the propylite; and in accounting for the development of these insignificant crevices to ore-bodies two and three hundred feet thick, Mr. Church advances one of the most important observations of his book.

He takes the bold ground that the Comstock is not a true fissure vein; but that it has been formed by the process of substituting quartz for the propylite in certain localities, which were prepared for the process in a way described by him.

The lode lies on one of the andesite dikes, and the metal-bearing water rose up the face of this dike, and penetrated the propylite strata whenever they had been opened.

This water was siliceous, and attacked the propylite rock, dissolving it and depositing silica in its place. Each layer of propylite was attacked on two sides, until finally the whole layer was removed, and the two seams of quartz met. The layers of propylite are of all thicknesses, from a few feet up to many yards, and when a number of them were involved in the process of substitution, some would be completely removed, when others were only half dissolved away. If the process of substitution stopped at this stage, the result would be a mass of quartz inclosing streaks and layers of propylite, just as the structure is found to exist at the edges of the quartz bodies.—*Engineering and Mining Journal.*

GEOGRAPHY AND TRAVELS.[1]

ASIA.—Col. Prejevalsky having passed through Bulun-tochoi, up the Urungu river, crossed the southern Altai mountains to Barkul, arriving at Hami about May 30, 1879. Hami is at the extremity of the sandy steppe described as the Mouschoun Gobi; it is a desert almost destitute of vegetation with great tracts of clay covered with gravel. While the temperature of the air was as high as 38° C., the soil had sometimes a temperature of 68° C. The only animals of large size seen were the antelope and wild camel. Prejevalsky crossed this desert in a south-eastern

[1] Edited by ELLIS H. YARNALL, Philadelphia.